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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,421	07/22/2003	Van D. Nguyen	400.191US01	7247

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EXAMINER

YU, JAE UN

ART UNIT PAPER NUMBER

2185

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,421

Applicant(s)

NGUYEN, VAN D.

Examiner

Jae U. Yu

Art Unit

2185

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The instant application having Application No. 10624421 has a total of 20 claims pending in the application, there are 6 independent claims and 14 dependent claims, all of which are ready for examination by the examiner.

Information Disclosure Statement

As required by M.P.E.P. 609 (C), the applicant's submission of the Information Disclosure Statement dated 1/12/2004 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by M.P.E.P. 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. **Claims 11-20** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-20 of copending Application No. 11436803. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application has the same scope and teaches every limitation of **claims 12, 14-16 and 18-19** from the instant application.

As per **claims 11, 13, 17 and 20**, the copending application has the same scope as the instant application except; that the copending application does not disclose expressly that the "select signal" is actually the "chip select signal" from the instant application and "a controller circuit".

The specification expressly teaches that the "select signal" is in fact a "chip select signal" in paragraph 31.

The specification expressly teaches the "controller circuit" in paragraph 30.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the instant application by including the "chip select signal" and "controller circuit" as taught by the specification in paragraphs 30 and 31. The motivation for doing so would have been logical to physical addressing optimization and the fast operation speed of a hardware circuitry.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

Claim 11 recites, "a range physical addresses". The examiner suggests that "of" is placed between the "range" and the "physical".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 13, 15, 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claims 13 and 17 recite the limitation "the system" in line 2. There is insufficient antecedent basis for this limitation in the claim.
3. Claims 15 and 16 recite the limitation "the method of claim 13" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Borkenhagen et al. (US 5,067,105).

2. Independent claim 1 discloses, “receiving a command comprising a first logical address [**Receiving a logical card address, Column 3, Lines 60-64**] from the range of logical addresses [**Logical Memory Addresses, Column 3, Lines 60-64**]”.

“Determining a first physical address, from a range of physical addresses, that corresponds to the first logical address [**Determining a physical card address that corresponds to the logical card address, Figure 2, (Column 3, Line 65 – Column 4, Line 10)]**”

“Generating a chip select signal in response to the first physical address [**Selecting a physical card based on the physical card address, (Column 3, Line 65 – Column 4, Line 10), Figure 1)]**”

3. Claim 2 discloses, “the range of physical addresses is contiguous [**“physical memory addresses” sharing the same “physical card address”, (Column 3, Line 65 – Column 4, Line 10), Figure 1)]**”.

4. **Claim 3** discloses, “the range of physical addresses is substantially equivalent to the range of logical addresses [The “logical memory address” and the corresponding “physical memory address” are identical except the first 3-bits (The identical addresses are materialized in a different physical memory card), (Column 3, Line 60 – Column 4, Line 10)]”.

5. **Claim 5** discloses, “the range of logical addresses are contiguous and the corresponding range of physical addresses is non-contiguous and comprised of a plurality of physical sub-ranges [“physical memory addresses materialized in a plurality of physical memory cards, Figure 2]”.

6. **Claim 6** discloses, “a chip select signal [Selecting a physical card based on the physical card address, (Column 3, Line 65 – Column 4, Line 10), Figure 1)] is generated for each physical address sub-range [“physical memory addresses materialized in a plurality of physical memory cards, Figure 2]”.

7. **Claim 7** discloses, “receiving a command comprising a first logical address [Receiving a logical card address, Column 3, Lines 60-64] from the range of logical addresses [Logical Memory Addresses, Column 3, Lines 60-64]”.

“Determining a first physical address, from a range of non-contiguous physical addresses [“physical memory addresses materialized in a plurality of physical

memory cards, Figure 2], that corresponds to the first logical address [Determining a physical card address that corresponds to the logical card address, Figure 2, (Column 3, Line 65 – Column 4, Line 10)]”

“Generating a chip select signal in response to the first physical address [Selecting a physical card based on the physical card address, (Column 3, Line 65 – Column 4, Line 10), Figure 1)]”

8. **Claim 8** discloses, “a controller circuit executing an application in which the first logical address is read from memory **[CPU executing an application and generating a logical memory address, Figure 1, Column 3, Lines 60-68]** along with the command”.

9. **Claim 9** discloses, “a device manager receiving the first logical address **[Physical card selector logic receiving the first logical address, Figure 1]** from a controller circuit”.

10. **Claim 10** discloses, “the device manager generates the chip select signal **[Physical card selector logic selecting appropriate chip, Figure 1, (Column 3, Line 65 – Column 4, Line 10)]** in response to the first physical address”.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 4, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen et al. (US 5,067,105) in view of Daberko (US 5,787,445).

2. As per claim 4, Borkenhagen et al. disclose the method recited in claim 1.

Borkenhagen et al. do not disclose expressly, "flash RAM".

Daberko discloses, "flash RAM" in column 3, at lines 14-16.

Borkenhagen et al. and Daberko are analogous art because they are from the same filed of endeavor of increasing fault tolerance by memory access control.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Borkenhagen et al. by including a "flash RAM" as taught by Daberko in column 3, at lines 14-16.

The motivation for doing so would have been increased fault tolerance to power interruption as expressly taught by Daberko in column 3, at lines 23-25.

Therefore, it would have been obvious to combine Daberko with Borkenhagen et al. for the benefit of increased fault tolerance to obtain the invention as specified in claim 4.

3. As per independent claims 11, 13, 17 and 20, Borkenhagen et al. discloses, “a controller circuit **[[CPU executing an application and generating a logical memory address, Figure 1, Column 3, Lines 60-68]]** executing an application and receiving a first logical address from the range of logical addresses in response to the execution of the application”.

“Determining a first physical address, from a range of non-contiguous physical addresses **[“physical memory addresses materialized in a plurality of physical memory cards, Figure 2]**, that corresponds to the first logical address **[Determining a physical card address that corresponds to the logical card address, Figure 2, (Column 3, Line 65 – Column 4, Line 10)]**”

“Generating a chip select signal in response to the first physical address **[Selecting a physical card based on the physical card address, (Column 3, Line 65 – Column 4, Line 10), Figure 1)]**”

Borkenhagen et al. do not disclose expressly, “flash RAM”.

Daberko discloses, “flash RAM” in column 3, at lines 14-16.

Borkenhagen et al. and Daberko are analogous art because they are from the same filed of endeavor of increasing fault tolerance by memory access control.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Borkenhagen et al. by including a “flash RAM” as taught by Daberko in column 3, at lines 14-16.

The motivation for doing so would have been increased fault tolerance to power interruption as expressly taught by Daberko in column 3, at lines 23-25.

Therefore, it would have been obvious to combine Daberko with Borkenhagen et al. for the benefit of increased fault tolerance to obtain the invention as specified in claim 11.

4. **Claim 12** discloses, “the plurality of non-contiguous sub-ranges is substantially equal to a logical address range of a flash memory device [The “logical memory address” and the corresponding “physical memory address” are identical except the first 3-bits (The identical addresses are materialized in a different physical memory card), (Column 3, Line 60 – Column 4, Line 10)]”.

5. **Claim 14** discloses, “the controller circuit is coupled to the plurality of flash memory through a plurality of address lines [Figure 3C, Daberko]”.

6. **Claims 15 and 18** disclose, "the controller circuit generates the first physical address in response to a look-up table entry comprising the first logical address and the first physical address [**data structure comprising logical cards and physical cards, Figure 2, Borkenhagen et al.**]"

7. **Claims 16 and 19** disclose, "the controller circuit generates the first physical address in response to adding an address offset to the first logical address [**the difference between the generated physical address and the logical address is the "offset", Figure 1]**".

Conclusion

A. **Claims Rejected in the Application**

Per the instant office action, claims 1-20 have received a first action on the merits and are subject of a first action non-final.

B. **Direction of Future Correspondences**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae Un Yu who is normally available from 9:00 A.M. to 5:30 P.M. Monday thru Friday and can be reached at the following telephone number: (571) 272-1133.

If attempts to reach the above noted examiner by telephone are unsuccessful, the Examiner's supervisor, Sanjiv Shah, can be reached at the following telephone number: (571) 272-4098.

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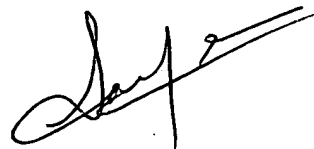
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September 4, 2006

Jae Un Yu

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JY

A handwritten signature in black ink, appearing to read 'Sanjiv Shah', with a stylized flourish extending from the end.

SANJIV SHAH
PRIMARY EXAMINER